



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,118	11/12/2003	Stephen C. Macevitz	55525-8045.US01	8171
22918	7590	10/01/2004	EXAMINER	
PERKINS COIE LLP P.O. BOX 2168 MENLO PARK, CA 94026			LU, FRANK WEI MIN	
			ART UNIT	PAPER NUMBER
			1634	

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/706,118

Applicant(s)

MACEVICZ, STEPHEN C.

Examiner

Frank W Lu

Art Unit

1634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-33 is/are pending in the application.
- 4a) Of the above claim(s) 23-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group II, claims 28-33 in the reply filed on September 3, 2004 is acknowledged. Therefore, claims 28-33 will be examined.

Specification

2. The disclosure is objected to because of the following informality: since case 09/549,748 now is US Patent No. 6,720,179 B1, applicant is required to update this information in the first sentence of the specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 28-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claim 28 is rejected as vague and indefinite because it is unclear what means "each pair of said plurality being from opposite ends of a restriction fragment of genomic DNA". Does this phrase mean that each pair of said plurality of pairs of sequence tags comprises some sequences from each end of a restriction fragment of genomic DNA. Please clarify.

6. Claim 32 is rejected as vague and indefinite because it is unclear that "said plurality" in claim 28 and "a plurality of pairs of sequence tags" in claim 28 are identical or not. Please clarify.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 28-30 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Sapolsky *et al.*, (US Patent No. 5,710,000, filed on June 7, 1995) as evidence by New England Biolabs 96/97 Catalog (pages 15, 18, 22, 23, and 35).

Sapolsky *et al.*, teach capturing sequences adjacent to type-IIs restriction sites for genomic library mapping.

Regarding claim 28, Sapolsky *et al.*, teach different type-IIs restriction sites in λ DNA (see Figure 1 and column 4, last paragraph bridging to column 5, first paragraph). Since the different type-IIs restriction sites in λ DNA are located on two ends of a restriction fragment when λ DNA is digested by different type-IIs restriction enzymes, and New England Biolabs 96/97 Catalog teaches that type-IIs restriction sites is from 9-18 bases in length (pages 15, 18,

22, 23, and 35), Sapolsky *et al.*, disclose that a plurality of pairs of sequence tags (ie., different type-IIIs restriction sites), each pair of said plurality of pairs of sequence tags being from opposite ends of a restriction fragment of genomic DNA, and each pair being from nine to eighteen basepairs in length as recited in claim 28.

Regarding claims 29 and 30, Sapolsky *et al.*, teach that said restriction fragment has ends produced by digestion with different restriction endonucleases (ie., AIW I, Hga I and BsmAI) and said restriction fragment has ends produced by digestion of two different restriction (ie., AIW I, and Hga I) endonucleases selected from a group consisting of three different restriction endonucleases (ie., AIW I, Hga I and BsmAI) as recited in claims 29 and 30 (see Figure 1).

Regarding claim 32, Sapolsky *et al.*, teach that said plurality of pairs of sequence tags are a sample (ie., λ DNA) having a size sufficient to contain with a probability of ninety-nine percent at least one copy of each of said pairs of sequence tags (ie., different type-IIIs restriction sites such as sites of AIW I, Hga I and BsmAI) as recited in claim 29.

Sapolsky *et al.*, teach all limitations recited in claims 29-30 and 32.

9. Claims 28-31 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Morgante *et al.*, (WO 96/170082, published on June 6, 1996)

Regarding claims 28-31 and 33, since Morgante *et al.*, teach to ligate synthetic oligonucleotide adaptors (tag) with approximately 10-30 bp long (page 51, first paragraph) to the ends of genomic DNA restriction fragments (page 50, third paragraph) and teach that the restriction enzymes with 4-, 5-, 6-, or 8-bp recognition site such as Taq I, Pst I and Hind III (see page 75, first paragraph) are combined to generate genomic DNA restriction fragments (see page

30), Morgante *et al.*, disclose that a plurality of pairs of sequence tags (ie., 18 bp adaptors in genomic DNA restriction fragments), each pair of said plurality of pairs of sequence tags being from opposite ends of a restriction fragment of genomic DNA, and each pair being from nine to eighteen basepairs in length as recited in claim 28. Since Morgante *et al.*, teach that different sequence tags have the same number of basepairs which are used to attach to the ends of genomic DNA restriction fragments (see Table IV in pages 76 and 77, SEQ ID NOs: 7-10), Morgante *et al.*, disclose that each sequence tag of each of said pairs (ie., SEQ ID NOs: 7-10) contains the same number of basepairs as recited in claim 33. Although Morgante *et al.*, make an oligonucleotide composition in a method that was different from the method recited in claims 29-31, the method taught by Morgante *et al.*, and the methods recited in claims 29-31 can make an oligonucleotide composition recited in claim 28. It is known that the patentability of a product does not depend on its method of production. If the claim is a product-by-process claim, it is well established that even though product-by process claims are limited by and defined by the process, the determination of the patentability of the product is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985).

Therefore, Morgante *et al.* teach the limitation recited by claims 28-31 and 33. .

Conclusion

10. NO claim is allowed.

Art Unit: 1634

11. Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CAR § 1.6(d)). The CM Fax Center number is either (703)872-9306.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Lu, Ph.D., whose telephone number is (571)272-0746. The examiner can normally be reached on Monday-Friday from 9 A.M. to 5 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion, can be reached on (571)272-0782.

Any inquiry of a general nature or relating to the status of this application should be directed to the Chemical Matrix receptionist whose telephone number is (703) 308-0196.

Frank Lu
PSA
September 20, 2004



FRANK LU
PATENT EXAMINER